

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Paul W. Winterrowd

Confirmation No.:

Application No.:

Examiner:

Filing Date: August 30, 2003

Group Art Unit:

Title: Multiplier Circuit

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:
☐ Statement under 37 CFR 1.97(e), or
☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97 (d) together with a:
☐ Statement under 37 CFR 1.97(e)(1) or (2), and
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

☒ Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

☒ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. **EV148864502US**

Date of Deposit **August 30, 2003**

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

By

Typed Name: **Amy Comeau**

Respectfully submitted,

Paul W. Winterrowd

By

Robert Plotkin, Esq.

Attorney/Agent for Applicant(s)

Reg. No. **43,861**

Date: **August 30, 2003**

PATENT APPLICATION

Sheet 1 of 3

FORM PTO-1449 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 200300504-1	APPLICATION NO.	CONFIRMATION NO.
	APPLICANT Paul W. Winterrowd		
	FILING DATE August 30, 2003	GROUP	

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	6,571,268 B1	May 27, 2003	Giacalone et al.	
	1B	2002/0169812	Nov. 14, 2002	Orchard	
	1C	6,460,064 B1	Oct. 1, 2002	Lee	
	1D	6,442,582 B1	Aug. 27, 2002	Hale	
	1E	2002/0116433	Aug. 22, 2002	Awaka et al.	
	1F	6,434,587 B1	Aug. 13, 2002	Liao et al.	
	1G	6,275,841 B1	Aug. 14, 2001	Potter et al.	
	1H	2001/0009012	Jul. 19, 2001	Itoh	
	1I	5,867,415	Feb. 2, 1999	Makino	
	1J	5,754,459	May 19, 1998	Telikepalli	
	1K	5,504,915	Apr. 2, 1996	Rarick	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L	WO95/04964A1	Feb. 16, 1995	Hyundai Electronics		
	1M	JP06348457A	Dec. 22, 1994	Toshihiro		X
	1N	JP04153730A	May 27, 1992	Gensuke		X
	1O	WO91/19249A1	Dec. 12, 1991	Micron Technology, I		
	1P	JP03269724A	Dec. 2, 1991	Fujitsu Ltd.		X

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

1Q	KWAN, Manto, Comparison of Various Multipliers for Performance Issues, High Speed & Low Power ASIC 97.575, March 24, 2003, Carleton University, Department of Electronics. http://web.doe.carleton.ca/shams/97575/MantoPresentation.ppt
1R	RABAEY, Jan M., CHANDRAKASAN, Anantha, NIKOLIC, Borivoje, Digital Integrated Circuits A Design Perspective, Arithmetic Circuits, January 2003, http://bwrc.eecs.berkeley.edu/lcBook/Slides/chapter11.ppt
1S	BOHSALI, Mounir, DOAN, Michael, Design of Regularly Structured Wallace Tree Multipliers, http://www.eecs.berkeley.edu/mounir/ee241/ee241.part2.pdf

EXAMINER	DATE CONSIDERED
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PATENT APPLICATION

Sheet 2 of 3

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REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	2A	5,347,482	Sep. 13, 1994	Williams	
	2B	5,265,043	Nov. 23, 1993	Naini et al.	
	2C	5,181,185	Jan. 19, 1993	Han et al.	
	2D	4,972,362	Nov. 20, 1990	Elkind et al.	
	2E	4,852,037	Jul. 25, 1989	Aoki	
	2F				
	2G				
	2H				
	2I				
	2J				
	2K				

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	2L	JP03214233A	Sep.19,1991	Matsushita Electric		X
	2M	JP62166424A	Jul.22,1987	Fujitsu Ltd.		X
	2N	JP57199044A	Dec.6, 1982	Fujitsu Ltd.		X
	2O					
	2P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	2Q	BOHSALI, Mounir, DOAN, Michael, Rectangular Styled Wallace Tree Multipliers, http://www.eecs.berkeley.edu/~mounir/ee241/ee241_final_report.pdf
	2R	Wallace, C.S. (1964). A suggestion for a fast multiplier. <i>IEEE Transaction on Computers</i> 13, 14--17.
	2S	A.D. Booth, "A signed binary multiplication technique," <i>Q. J. Mech. Appl.</i> 118 Math., vol. 4, Part 2, 1951.

EXAMINER

DATE CONSIDERED

PATENT APPLICATION

Sheet 3 of 3

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REFERENCE DESIGNATION**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	3A	5,070,502	Dec. 3, 1991	Supnik	
	3B				
	3C				
	3D				
	3E				
	3F				
	3G				
	3H				
	3I				
	3J				
	3K				

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	3L					
	3M					
	3N					
	3O					
	3P					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	3Q	
	3R	
	3S	

EXAMINER	DATE CONSIDERED
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